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EXAMINER

VUONG, QUOCHIE B

ART UNIT PAPER NUMBER

2685

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/771,224

Applicant(s)

WILSON ET AL.

Examiner

Quochien B Vuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 and 8-10 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date: _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>01/03/02</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of groups II (claims 5-7) and V (claim 11) in the reply filed on 08/30/2004 is acknowledged.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 01/03/2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Minarik (US 6,018,644).

Regarding claim 5, Minarik (figure 5) discloses a method for providing redundancy in a wireless hub (column 1, lines 33-54), comprising: receiving a plurality of upstream signals (150, 152, and 154); amplifying each upstream signal with a

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separate low noise amplifier (LNA) (160, 168, and 176); down converting the output of each of the LNA by utilizing a separate down converter (inherently included in each path between the LNAs and receivers 162, 170, and 178) (column 7, lines 34-39); receiving a down converted signal from each down converter with a separate receiver (162, 170, and 178); providing a data signal from a receiver; and when no data signal is provided by one of the receivers, selecting an alternate LNA (if no data signal is provided by the receiver 162, switches 130, 132, and 134 switch from LNA 160 to LNA 168 or LNA 176 to redundant receivers 170 or 178) to amplify the associated upstream signal (column 6, line 20 – column 9, line 40).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minarik in view of McCollum et al. (US 5,666,646).

Regarding claim 7, Minarik discloses a method for providing redundancy in a wireless hub (column 1, lines 33-54), comprising: receiving a plurality of upstream signals (150, 152, and 154); amplifying each upstream signal with a separate low noise amplifier (LNA) (160, 168, and 176); down converting the output of each of the LNA by utilizing a separate down converter (inherently included in each path between the LNAs and receivers 162, 170, and 178) (column 7, lines 34-39); receiving a down converted signal from each down converter with a separate receiver (162, 170, and 178); providing a data signal from a receiver; and when no data signal is provided by one of the receivers, providing the signal to a redundant LNA (168 or 176) and to a redundant down converter, the redundant down converter providing a redundant down converted signal to a redundant receiver (170 or 178) (column 6, line 20 – column 9, line 40).

Minarik fails to teach when no data signal is provided by one of the receivers, providing the output of the LNA associated with the receiver to a redundant down converter, the redundant down converter providing a redundant down converted signal to a redundant receiver. However, McCollum et al. (figure 6) disclose when no data signal is provided by one of the receivers, providing the output associated with the receiver to a redundant down converter, the redundant down converter providing a redundant down converted signal to the receiver (column 6, lines 7-19). Therefore, it would have been obvious for

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one having ordinary skill in the art at the time the invention was made to adapt the redundant converter of McCollum et al. to the method of Minarik for providing reliable backup protection with less cost (as suggested by McCollum et al., column 1, line 66 – column 2, line 6).

***Allowable Subject Matter***

8. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 6, Minarik disclose the method of claim 5. However, Minarik fails to teach or fairly suggest wherein the method above further comprising when no data signal is provided by one of the receivers after selecting an alternate low noise amplifier, providing the output of the low noise amplifier associated with the receiver to a redundant down converter, the redundant down converter providing a redundant down converted signal to a redundant receiver.

9. Claim 11 is allowed over the cited prior art.

Regarding claim 11, Minarik discloses a method for low penetration redundancy, the method comprising: receiving a plurality of upstream signals (150, 152, and 154); amplifying each upstream signal with a separate low noise amplifier (LNA) (160, 168, and 176); down converting the output of each of the LNA by utilizing a separate down converter (inherently included in each path between the LNAs and receivers 162, 170,

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and 178) (column 7, lines 34-39); receiving a down converted signal from each down converter with a separate receiver (162, 170, and 178); providing a data signal from a receiver; and when no data signal is provided by one of the receivers, providing the signal to a redundant LNA (168 or 176) and to a redundant down converter, the redundant down converter providing a redundant down converted signal to a redundant receiver (170 or 178) (column 6, line 20 – column 9, line 40). And McCollum et al. disclose when no data signal is provided by one of the receivers, providing the output associated with the receiver to a redundant down converter, the redundant down converter providing a redundant down converted signal to the receiver (column 6, lines 7-19; and figure 6). However, Minarik and McCollum et al. fail to teach or fairly suggest wherein the method above further comprising: splitting each amplified signal into two signals; time sharing the down converter and receiver during a low penetration period.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Martin et al. (US 6,745,004) disclose a satellite frequency generation incorporating secondary power supply.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B Vuong whose telephone number is (703) 306-4530. The examiner can normally be reached on M-F 9:30-18:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**QUOCHIE B. VUONG**  
**PRIMARY EXAMINER**

Quochien B. Vuong

Nov 24, 2004.